

**COMPLETE SAMPLE DELIVERY GROUP FILE (CSF)
EVIDENCE AUDIT CHECKLIST
U.S. Environmental Protection Agency - Region 8
Environmental Services Division, Multi-Media Branch
Analytical Operations Section**

Audit Number: 08-58-08

Date CSF Received: 6/25/08

Received By: Cain Blum

Date of Audit: 6/30/08

Audited By: Cain Blum

Resubmitted CSF? Yes ☐ No ☒

Lab Name: DATA CHEM Laboratories

Lab Location: Salt Lake City, UT

Site Name: Richardson Flat Tailings

Site Manager: Kathryn Hernandez

RAS Number: 37402

ULSA Number:

SDG Number: MH2608

Number of Samples: 4/2/S

CLP Lab Code: DATA C

AUDIT CHECKLIST

CHAIN OF CUSTODY

- | | | |
|---|---|--|
| 1. Custody Seal Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| 2. Condition of Seal? Intact <input checked="" type="checkbox"/> Signed <input checked="" type="checkbox"/> Broken <input type="checkbox"/> Unsigned <input type="checkbox"/> | | |
| 3. Chain of Custody Record(s) Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| 4. Chain of Custody Record(s) Signed? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| 5. Chain of Custody Record(s) Dated? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| 6. Traffic Report(s) or Packing List(s) Present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| 7. Traffic Report(s) or Packing List(s) Signed? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| 8. Airbill Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| 9. Airbill Number(s): <u>Samples hand delivered to laboratory</u> | | |
| 10. Airbill Signed? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| 11. Airbill Dated? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| 12. Sample Tags Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| 13. Should Sample Tags be Present? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |

See pg 83

AUDIT NUMBER: 08-68-08

FORM DC-2

4. Form DC-2 Present?
5. Numbering Scheme on Form DC-2 Correct?
6. Enclosed Documents Listed?
7. Listed Documents Enclosed?

Yes ☒ No ☐
Yes ☒ No ☐
Yes ☒ No ☐
Yes ☒ No ☐

FORM DC-1

8. Form DC-1 Present?
9. Form DC-1 Complete?
10. Form DC-1 Correct?

Yes ☒ No ☐
Yes ☒ No ☐
Yes ☒ No ☐

DOCUMENT CONTROL

1. Laboratory Documents Complete?
2. Laboratory Documents Legible?
3. Original Documents Included in CSF?

Yes ☒ No ☐
Yes ☒ No ☐
Yes ☒ No ☐

DATA INSPECTION

4. Form I's present (for each analytical fraction as defined by the Traffic Report/Chain of Custody Record)?
5. Forms 2 through 8 (VOC & SVOC), Forms 2 through 10 (Pesticides), Forms 2 through 14 (Metals & Cyanide) present?
6. Raw data present (for each analytical fraction as defined by the Traffic Report/Chain of Custody Record)?
7. Percent Solids Form present for soil samples?

Yes ☒ No ☐
Yes ☒ No ☐
Yes ☒ No ☐
Yes ☒ No ☐

E: If items 1, 3, 4, 6, 7, 8, 12, 14, 18, or 22 are missing, corrective action measures must be taken by the CSF auditor and marized below.

DIT NUMBER: 08 - 58 - 08

COMMENTS AND NOTES:

Carol Blair 6/30/08
Editor Date

EPA OFFICIAL SEALS PAGE

Please attach all custody seals below:



AUDIT NUMBER: 08-58-08

EPA CLP ELECTRONIC DISKETTE(S)

CASE #: 37402 SDG #: MH2608

SITE NAME: Richardson Flat Tail

RPM: Kathryn Hernandez

DATE: 6/30/08

AUDITOR: Carol Bump

Audit - 08-58-08

RAS - 37402

SDG - MH2608

Site - Richardson Flat Tail

RPM - Kathryn Hernandez

Date - 6/30/08

LAB - DATA CHEM

COVER PAGE

Contract: EP-W-06-054

SDG No. : MH2608

EPA Sample No.

Lab Sample ID

8155033001

8155033002

8155033003

53984

53985

8155033004

ICP-AES ICP-MS

(Yes/No).

YES

NO

(Yes/No).

YES

NO.

(Yes/No)

NO

NO

Comments:

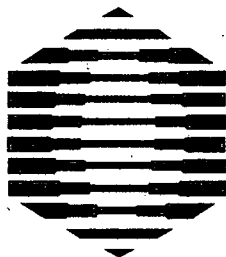
I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette (or via an alternate means of electronic transmission, if approved in advance by USEPA) has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature:

Name: Neil Edwards

Date: 06/23/2008

Title: Chemist



**DATA
CHEM**
LABORATORIES, INC.

SDG NARRATIVE

Case #: 37402
SDG#: MH2608
Contract #: EP-W-06-054
DCL Set ID#: 8155033
June 23, 2008

General Information

The four samples in this SDG were analyzed by methodologies contained in ILM05.4, by MOD # 1553.0. All concentration, analytical, and method qualifiers are defined in the SOW.

Holding Times

All samples were prepared and analyzed within method required holding times.

Initial and Continuing Calibration

All initial and continuing calibration verification and blank analyses were performed within the designated frequency and recoveries of the verifications and concentrations of the blanks met method acceptance criteria.

Interference Check Sample Analysis

Results for the interference check samples met method acceptance criteria.

Preparation Blanks

The absolute values of all analyte concentrations in the preparation blanks were lower than the Contract Required Quantitation Limits.

Laboratory Control Sample Analysis

Results for the analysis of the LCS met method acceptance criteria.

Matrix Spike Analysis

All matrix spike recoveries were within the limits of 75-125%

Matrix Duplicate Analysis

All matrix duplicate results met method criteria.

Serial Dilution

ICP-AES Serial Dilution results met method acceptance criteria.

Miscellaneous Comments

All calibration data is linear, please see raw data.
Cooler temps were at 6 °C at time of receipt.

Example Equations

Method HS1: $C \times DF \times \frac{V_f}{W_i} \div S = \text{Concentration}(\mu\text{g/g}) = \text{Concentration}(\text{mg/Kg})$

C = Instrument value in $\mu\text{g/L}$ (The average of all replicate integrations).

Vf = Final digestion volume (L)

Wi = Initial digestion Weight (g)

DF = Dilution Factor

S = % Solids/100

Request for Quote (RFQ) for Modified Analysis

Date: April 22, 2008

Subject: Modification Reference Number: 1553.0
Title: SPLP for ICP-AES
Sample Matrix: Soil/Sediment
Fraction Affected: Metals
Statement of Work: ILM05.4

Purpose:

The Contractor Laboratory is requested to perform the following modified analyses under the Inorganic Statement of Work (SOW) ILM05.4, based on the additional specifications listed below. Unless specifically modified by this modification, all analyses, Quality Control (QC), and reporting requirements specified in SOW ILM05.4 remain unchanged and in full force and effect. The number of samples requested in this modification is not guaranteed.

Please note that accepting a modified analysis request is voluntary, and that the Laboratory is not required to accept the modified analysis. There will be no adverse effect to the Laboratory for not accepting the modified analysis request. However, once the Laboratory accepts the request for modified analysis, it shall perform the analysis in accordance with this modification and as specified in SOW ILM05.4.

The Laboratory is requested to review the modification described herein, determine whether or not it shall accept the requested modified analyses, and complete the attached response form. The Laboratory shall provide comments in response to the required changes in the designated area, in order to ensure that the modified analysis can be completed in accordance with the specifications described herein.

Notice to Contractors: Acceptance of Modified Analysis samples will not count against the monthly capacity.

Modification to the SOW Specifications:

The contract Laboratory shall extract soil/sediment samples by Method SW-846 1312 [Synthetic Precipitation Leaching Procedure] using extraction fluid number two.

The Laboratory shall digest the SPLP extracts by preparation methods HW1 or MW1, and analyze for the Target Analyte List (TAL) by ICP-AES as indicated on the Traffic Report/Chain of Custody record.

The Laboratory shall analyze the SPLP extraction blanks as preparation blanks (PBW).

The Laboratory shall perform the Matrix Spike at the SOW specified levels.

The Laboratory shall report SPLP results as aqueous samples.

The Laboratory shall provide raw data [laboratory bench sheets, logs, notebook pages] for the SPLP procedure. This will include the initial determination of percent solids, amount of liquid (if any) separated from the solid phase, mass of solids material, and volume of extraction fluid used.

Reporting Requirements:

Hardcopy and electronic data reporting are required as specified per SOW ILM05.4. All hardcopy and electronic data shall be adjusted to incorporate modified specifications. This includes attaching a copy of the requirements for modified analysis to the SDG Narrative. If specific problems occur with incorporation of the modified analysis into the hardcopy and/or electronic deliverable, the Laboratory shall contact the DASS Manager within the Sample Management Office (SMO) at (703) 818-4233 or via email at CCSSUPPORT@fedcsc.com for resolution.

All samples and/or fractions assigned to an SDG shall be analyzed under the same Modified Analysis requirements as established in this memorandum. The Laboratory shall not include data from multiple Modified Analyses in one SDG.

The Laboratory shall include the Modification Reference Number 1553.0 on each hardcopy data form under the "NRAS No:" header appearing on each form as well as the "NRAS No." field on the Record type 21 of the electronic deliverable (if diskette deliverable is required). The Laboratory shall also document the Modification Reference Number and Solicitation Number on the SDG Coversheet.

Clarifications/Revisions to the RFQ for Modified Analysis:

Laboratory Name:**Laboratory Comments:**

USEPA - CLP

1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

MH2608

Lab Name: DATA CHEM LABORATORIES Contract: EP-W-06-054Lab Code: DATA C Case No.: 37402 NRAS No.: 1553.0 SDG No.: MH2608Matrix: (soil/water) WATERLab Sample ID: 8155033001Level: (low/med) LOWDate Received: 06/03/2008% Solids: 0.0Concentration Units (ug/L or mg/kg dry weight): ug/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	129.	J		P
7440-36-0	Antimony	237.			P
7440-38-2	Arsenic	45.9			P
7440-39-3	Barium	685.			P
7440-41-7	Beryllium	5.6	U		P
7440-43-9	Cadmium	5.6			P
7440-70-2	Calcium	13700			P
7440-47-3	Chromium	2.5	J		P
7440-48-4	Cobalt	55.6	U		P
7440-50-8	Copper	48.5			P
7439-89-6	Iron	562.			P
7439-92-1	Lead	455.			P
7439-95-4	Magnesium	1280	J		P
7439-96-5	Manganese	157.			P
7439-97-6	Mercury				NR
7440-02-0	Nickel	1.0	J		P
7440-09-7	Potassium	445.	J		P
7782-49-2	Selenium	2.7	J		P
7440-22-4	Silver	5.6	J		P
7440-23-5	Sodium	5680			P
7440-28-0	Thallium	27.8	U		P
7440-62-2	Vanadium	2.2	J		P
7440-66-6	Zinc	426.			P
57-12-5	Cyanide				NR

Color Before: COLORLESSClarity Before: CLEAR

Texture: _____

Color After: COLORLESSClarity After: CLEAR

Artifacts: _____

Comments:

Olson, Roxanne

From: Kramer, Caroline [ckramer5@fedcsc.com]
Sent: Tuesday, June 03, 2008 12:28 PM
To: Olson, Roxanne
Cc: beard.carol@epa.gov
Subject: Region 08 | Case 37402 | Lab DATAC | Issue Discrepancies with tags, jars, and/or TR/COC | FINAL

Roxy,

Summary Start

Issue: DATAC received samples with the attached non-CLP TR/COC. The samples did not have CLP sample ID and were handwritten in with the commercial samples for this site, which DATAC is also analyzing.

Resolution: Per Region 8, the laboratory will use the CLP sample IDs provided in the table below (also as a spreadsheet attached). The water samples will require two CLP IDs for the dissolved and total metals analysis.

The laboratory will note the issue in the SDG Narrative and proceed with the analysis of the samples.

CLP Sample ID	Field Sample number	Matrix	Collection date	Collection time	Analysis request
MH2600	SC-SW-1	water	6/2/2008	13:15	TM by ICP-MS (15
MH2601	SC-SW-1	water (DM)	6/2/2008	13:15	DM by ICP-MS (1554.1)
MH2608	SC-SW-1	soil	6/2/2008	13:15	TM/SPLP (1553
MH2602	SC-SW-2	water	6/2/2008	14:30	TM by ICP-MS (15
MH2603	SC-SW-2	water (DM)	6/2/2008	14:30	DM by ICP-MS (1554.1)
MH2609	SC-SW-2	soil	6/2/2008	14:30	TM/SPLP (1553
MH2604	SC-SW-3	water	6/2/2008	15:15	TM by ICP-MS (15
MH2605	SC-SW-3	water (DM)	6/2/2008	15:15	DM by ICP-MS (1554.1)
MH2610	SC-SW-3	soil	6/2/2008	15:15	TM/SPLP (1553
MH2606	SC-SW-4	water	6/2/2008	16:00	TM by ICP-MS (15
MH2607	SC-SW-4	water (DM)	6/2/2008	16:00	DM by ICP-MS (1554.1)
MH2611	SC-SW-4	soil	6/2/2008	16:00	TM/SPLP (1553

Issue 2: There were no sample tags received with the samples.

Resolution 2: Per Region 8, the laboratory will note the issue in the SDG Narrative and proceed with the analysis of the samples.

Summary End

Please let me know if you have any questions or problems.
 Thank you,

Caroline L. Kramer
 ckramer5@fedcsc.com
 Computer Sciences Corporation (CSC)
 703.818.4248

 This is a PRIVATE message. If you are not the intended recipient, please delete without copying and kindly advise

6/3/2008

us by e-mail of the mistake in delivery. NOTE: Regardless of content, this e-mail shall not operate to bind CSC to any order or other contract unless pursuant to explicit written agreement or government initiative expressly permitting the use of e-mail for such purpose.

- 6/3/2008 Phone conversation between Caroline Kramer, SMO, and Carol Bears, Region 8. Carol indicated that SMO should provide new CLP sample IDs for the samples received on 6/3 under Case 37402. Region 8 has contacted the samplers and they will be using F2L to generate CLP TR's with CLP sample IDs in future shipments. Carol also indicated that there probably were no sample tags received with the samples and that the laboratory should note that issue in the SDG Narrative and proceed with the analysis.
- 6/3/2008 Phone conversation between Caroline Kramer, SMO, and Roxy Olson, DATAC. Roxy would like corresponding CLP sample IDs for the samples received on 6/3 with the attached TR/COC. Roxy also confirmed that no sample tags were received with the samples.

-----Original Message-----

From: Olson, Roxanne [mailto:olsonr@datachem.com]

Sent: Tuesday, June 03, 2008 1:14 PM

To: Kramer, Caroline

Subject: Case 37402

Attached is the DATAC CoC with the samples on it for the above referenced case. I just left you a message on your phone regarding this. Please call me and maybe we can sort it out.

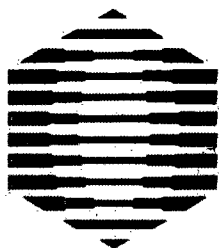
Roxy

6/3/2008

SAMPLE TAG INFORMATION SHEET

There are no Sample Tags included with this SDG

Notations concerning the location of the Sample Tags are included in Forms DC-1, DC-2 and in the SDG Administrative Narrative (if it is required).



**DATA
CHEM**
LABORATORIES, INC.

SDG Administrative Narrative

Contract: EP-W-06-054
Case: 37402
SDG: MH2608
Set ID No.: 8155033

Cooler # and temperatures of each (upon receipt)

Cooler Number C08-	<u>NA</u>	Arrival temperature was	<u>6</u> °C
Cooler Number C08-	<u></u>	Arrival temperature was	<u></u> °C
Cooler Number C08-	<u></u>	Arrival temperature was	<u></u> °C
Cooler Number C08-	<u></u>	Arrival temperature was	<u></u> °C
Cooler Number C08-	<u>6/24/08</u>	Arrival temperature was	<u></u> °C
Cooler Number C08-	<u>MD</u>	Arrival temperature was	<u></u> °C
Cooler Number C08-	<u></u>	Arrival temperature was	<u></u> °C
Cooler Number C08-	<u></u>	Arrival temperature was	<u></u> °C
Cooler Number C08-	<u></u>	Arrival temperature was	<u></u> °C

Communications:

Any sample receiving issues with this SDG are fully documented through the email communications which are included as a portion of this SDG Narrative and immediately follow this page. Copies of each of these email communications are also located in the communication section of this datapackage. In addition, any analytical issues pertinent to a given fraction are fully documented by the analyst in the associated narrative for the applicable fraction.

Comments:

None.

Signature: **Date:** 6/24/08

Olson, Roxanne

From: Kramer, Caroline [ckramer5@fedcsc.com]

Sent: Tuesday, June 03, 2008 12:28 PM

To: Olson, Roxanne

Cc: beard.carol@epa.gov

Subject: Region 08 | Case 37402 | Lab DATAC | Issue Discrepancies with tags, jars, and/or TR/COC | FINAL

Roxy,

Summary Start

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Resolution: Per Region 8, the laboratory will use the CLP sample IDs provided in the table below (also as a spreadsheet attached). The water samples will require two CLP IDs for the dissolved and total metals analysis. The laboratory will note the issue in the SDG Narrative and proceed with the analysis of the samples.

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MH2606	SC-SW-4	water	6/2/2008	16:00	TM by ICP-MS (15
MH2607	SC-SW-4	water (DM)	6/2/2008	16:00	DM by ICP-MS (1554.1)
MH2611	SC-SW-4	soil	6/2/2008	16:00	TM/SPLP (1553

Issue 2: There were no sample tags received with the samples.

Resolution 2: Per Region 8, the laboratory will note the issue in the SDG Narrative and proceed with the analysis of the samples.

Summary End

Please let me know if you have any questions or problems.

Thank you,

Caroline L. Kramer

ckramer5@fedcsc.com

Computer Sciences Corporation (CSC)

703.818.4248

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6/3/2008

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- 6/3/2008 Phone conversation between Caroline Kramer, SMO, and Roxy Olson, DATAC. Roxy would like corresponding CLP sample IDs for the samples received on 6/3 with the attached TR/COC. Roxy also confirmed that no sample tags were received with the samples.

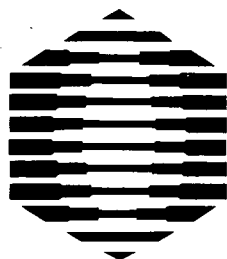
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To: Kramer, Caroline
Subject: Case 37402

Attached is the DATAC CoC with the samples on it for the above referenced case. I just left you a message on your phone regarding this. Please call me and maybe we can sort it out.

Roxy

6/3/2008



**DATA
CHEM**
LABORATORIES, INC.

SDG NARRATIVE

Case #: 37402
SDG#: MH2608
Contract #: EP-W-06-054
DCL Set ID#: 8155033
June 23, 2008

General Information

The four samples in this SDG were analyzed by methodologies contained in ILM05.4, by MOD # 1553.0. All concentration, analytical, and method qualifiers are defined in the SOW.

Holding Times

All samples were prepared and analyzed within method required holding times.

Initial and Continuing Calibration

All initial and continuing calibration verification and blank analyses were performed within the designated frequency and recoveries of the verifications and concentrations of the blanks met method acceptance criteria.

Interference Check Sample Analysis

Results for the interference check samples met method acceptance criteria.

Preparation Blanks

The absolute values of all analyte concentrations in the preparation blanks were lower than the Contract Required Quantitation Limits.

Laboratory Control Sample Analysis

Results for the analysis of the LCS met method acceptance criteria.

Matrix Spike Analysis

All matrix spike recoveries were within the limits of 75-125%

Matrix Duplicate Analysis

All matrix duplicate results met method criteria.

Serial Dilution

ICP-AES Serial Dilution results met method acceptance criteria.

Miscellaneous Comments

All calibration data is linear, please see raw data.
Cooler temps were at 6 °C at time of receipt.

Example Equations

$$\text{Method HS1: } C \times DF \times \frac{V_f}{W_i} \div S = \text{Concentration}(\mu\text{g/g}) = \text{Concentration}(\text{mg/Kg})$$

C = Instrument value in $\mu\text{g/L}$ (The average of all replicate integrations).

Vf= Final digestion volume (L)

Wi= Initial digestion Weight (g)

DF = Dilution Factor

S = % Solids/100

Request for Quote (RFQ) for Modified Analysis

Date: April 22, 2008

Subject: Modification Reference Number: 1553.0

Title: SPLP for ICP-AES

Sample Matrix: Soil/Sediment

Fraction Affected: Metals

Statement of Work: ILM05.4

Purpose:

The Contractor Laboratory is requested to perform the following modified analyses under the Inorganic Statement of Work (SOW) ILM05.4, based on the additional specifications listed below. Unless specifically modified by this modification, all analyses, Quality Control (QC), and reporting requirements specified in SOW ILM05.4 remain unchanged and in full force and effect. The number of samples requested in this modification is not guaranteed.

Please note that accepting a modified analysis request is voluntary, and that the Laboratory is not required to accept the modified analysis. There will be no adverse effect to the Laboratory for not accepting the modified analysis request. However, once the Laboratory accepts the request for modified analysis, it shall perform the analysis in accordance with this modification and as specified in SOW ILM05.4.

The Laboratory is requested to review the modification described herein, determine whether or not it shall accept the requested modified analyses, and complete the attached response form. The Laboratory shall provide comments in response to the required changes in the designated area, in order to ensure that the modified analysis can be completed in accordance with the specifications described herein.

Notice to Contractors: Acceptance of Modified Analysis samples will not count against the monthly capacity.

Modification to the SOW Specifications:

The contract Laboratory shall extract soil/sediment samples by Method SW-846 1312 [Synthetic Precipitation Leaching Procedure] using extraction fluid number two.

The Laboratory shall digest the SPLP extracts by preparation methods HW1 or MW1, and analyze for the Target Analyte List (TAL) by ICP-AES as indicated on the Traffic Report/Chain of Custody record.

The Laboratory shall analyze the SPLP extraction blanks as preparation blanks (PBW).

The Laboratory shall perform the Matrix Spike at the SOW specified levels.

The Laboratory shall report SPLP results as aqueous samples.

The Laboratory shall provide raw data [laboratory bench sheets, logs, notebook pages] for the SPLP procedure. This will include the initial determination of percent solids, amount of liquid (if any) separated from the solid phase, mass of solids material, and volume of extraction fluid used.

Reporting Requirements:

Hardcopy and electronic data reporting are required as specified per SOW ILM05.4. All hardcopy and electronic data shall be adjusted to incorporate modified specifications. This includes attaching a copy of the requirements for modified analysis to the SDG Narrative. If specific problems occur with incorporation of the modified analysis into the hardcopy and/or electronic deliverable, the Laboratory shall contact the DASS Manager within the Sample Management Office (SMO) at (703) 818-4233 or via email at CCSSUPPORT@fedcsc.com for resolution.

All samples and/or fractions assigned to an SDG shall be analyzed under the same Modified Analysis requirements as established in this memorandum. The Laboratory shall not include data from multiple Modified Analyses in one SDG.

The Laboratory shall include the Modification Reference Number 1553.0 on each hardcopy data form under the "NRAS No:" header appearing on each form as well as the "NRAS No." field on the Record type 21 of the electronic deliverable (if diskette deliverable is required). The Laboratory shall also document the Modification Reference Number and Solicitation Number on the SDG Coversheet.

Clarifications/Revisions to the RFQ for Modified Analysis:

Laboratory Name:**Laboratory Comments:**

SAMPLE LOG-IN SHEET

MSR 1553.0

Lab Name		DataChem Laboratories, Inc.				Page 1 of 1			
Received By (Print Name)						Log-In Date			
NICOLE LOREZ						6/3/08			
Received By (Signature)									
Case Number				Sample Delivery Group No.		NRAS Number			
B7402				MH 2408		N/A			
Remarks:		EPA Sample #	Aqueous Sample pH	Corresponding		Remarks: Condition of Sample Shipment, etc.			
				Sample Tag #	Assigned Lab #				
1. Custody Seal (s)		MH 2400	42	N/A		TM / 10PMS water			
Present/Absent*								DM / 10PMS water	
Intact/Broken*								TM / 10PMS water	
2. Custody Seal Nos.								DM / 10PMS water	
N/A								TM / 10PMS water	
3. Chain-of Custody Records								DM / 10PMS water	
Present/Absent*								TM / 10PMS water	
4. Traffic Report or Packing Lists								DM / 10PMS water	
Present/Absent*								TM / 10PMS water	
5. Airbill								DM / 10PMS water	
Airbill/Sticker Present/Absent*								DM / 10PMS water	
6. Airbill No.						8155033001 SLP Metals Soil			
N/A						02			
7. Sample Tags						03			
Present/Absent*						04			
Listed/Not Listed on Chain-of-Custody									
Sample Tag Numbers									
8. Sample Condition									
Intact/Broken*/Leaking*									
9. Cooler Temperature Indicator Bottle									
Present/Absent*									
10. Cooler Temperature									
6°									
11. Does Information on custody records, traffic reports, and sample tags agree?									
Yes/No*									
12. Date Received at Lab									
6/3/08									
13. Time Received									
840									
Sample Transfer									
Fraction		Fraction		Fraction		Fraction			
TM DM / SLP Metals		SLP Metals		SLP Metals		SLP Metals			
Area #		Area #		Area #		Area #			
F-231		F-231		F-231		F-231			
By		By		By		By			
NL		NL		NL		NL			
On		On		On		On			
6/3/08		6/3/08		6/3/08		6/3/08			

* Contact SMO and attach record of resolution

Reviewed By		Logbook No.	
Lorraine Olsen		Not Applicable	
Date		Logbook Page No.	
6/3/08		Not Applicable	
		6	

FULL INORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

LABORATORY NAME	DataChem Laboratories, Inc.		
CITY/STATE	Salt Lake City, UT 84123		
CASE NO.	37402	SDG NO.:	MH2608
SDG NOS. TO FOLLOW	N/A		
NRAS No.	N/A		
CONTRACT NO.	EP-W-06-054		
SOW NO.	ILM05.4		

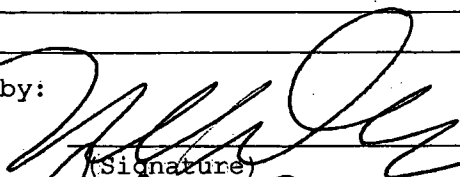
All documents delivered in the Complete SDG File must be original documents where possible.
(Reference - Exhibit B Section 2.6)

	PAGE NOS		CHECK	
	FROM	TO	LAB	REGION
1. Cover Page	<u>1</u>	<u>1</u>	✓	✓
2. SDG Narrative	<u>2</u>	<u>5</u>	✓	✓
3. Sample Log-In Sheet (DC-1)	<u>6</u>	<u>6</u>	✓	✓
4. Inventory Sheet (DC-2)	<u>7</u>	<u>8</u>	✓	✓
5. Traffic Report/Chain of Custody Record(s)	<u>9</u>	<u>12</u>	✓	✓
Inorganic Analysis				
6. Data Sheet (Form I-IN)	<u>13</u>	<u>16</u>	✓	✓
7. Initial & Continuing Calibration Verification (Form IIA-IN)	<u>17</u>	<u>18</u>	✓	✓
8. CRQL Standard (Form IIB-IN)	<u>19</u>	<u>19</u>	✓	✓
9. Blanks (Form III-IN)	<u>20</u>	<u>20</u>	✓	✓
10. ICP-AES Interference Check Sample (Form IVA-IN)	<u>21</u>	<u>22</u>	✓	✓
11. ICP-MS Interference Check Sample (Form IVB-IN)	<u>NA</u>		✓	
12. Matrix Spike Sample Recovery (Form VA-IN)	<u>23</u>	<u>23</u>	✓	✓
13. Post-Digestion Spike Sample Recovery (Form VB-IN)	<u>NA</u>		✓	
14. Duplicates (Form VI-IN)	<u>24</u>	<u>24</u>	✓	✓
15. Laboratory Control Sample (Form VII-IN)	<u>25</u>	<u>25</u>	✓	✓
16. ICP-AES and ICP-MS Serial Dilutions (Form VIII-IN)	<u>26</u>	<u>26</u>	✓	✓
17. Method Detection Limits (Annually) (Form IX-IN)	<u>27</u>	<u>28</u>	✓	✓
18. ICP-AES Interelement Correction Factors (Quarterly) Form XA-IN)	<u>29</u>	<u>29</u>	✓	✓
19. ICP-AES Interelement Correction Factors (Quarterly) Form XB-IN)	<u>30</u>	<u>31</u>	✓	✓
20. ICP-AES and ICP-MS Linear Ranges (Quarterly) Form XI-IN)	<u>32</u>	<u>32</u>	✓	✓
21. Preparation Log (Form XII-IN)	<u>33</u>	<u>33</u>	✓	✓

FULL INORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

	PAGE NOS		CHECK	
	FROM	TO	LAB	REGION
22. Analysis Run Log (Form XIII-IN)	34	34	✓	✓
23. ICP-MS Tune (Form XIV-IN)	NA		✓	
24. ICP-MS Internal Standards Relative Intensity Summary (Form XV-IN)	NA		✓	
25. ICP AES Raw Data	35	80	✓	✓
26. GFAA Raw Data (If Applicable)	NA		✓	
27. ICP-MS Raw Data	NA		✓	
28. Mercury Raw Dta	NA		✓	
29. Cyanide Raw Data	NA		✓	
30. Preparation Logs Raw Data	81	81	✓	✓
31. Percent Solids Determination Log	82	82	✓	✓
32. USEPA Shipping/Receiving Documents				
Airbill (No. of Shipments _____)	NA		✓	
Sample Tags	83	83	✓	✓
Sample Log-In Sheet (Lab)	NA		✓	
33. Misc. Shipping/Receiving Records (list all individual records)				
Telephone Logs	NA		✓	
DCL CRIR	NA		✓	
DCL SDG TR Cover Sheet	84	84	✓	✓
34. Internal Lab Sample Transfer Records and Tracking Sheets (describe or list)				
DCL Work Order	NA		✓	
DCL COC	85	86	✓	✓
35. Internal Original Sample Prep & Analysis Records (describe or list)				
Prep. Records	87	95	✓	✓
Analysis Records	96	118	✓	✓
Description	NA		✓	
36. Other Records (describe or list)				
Telephone Communications Log	NA		✓	
E-mail Communications	119	120	✓	✓
37. Comments:				

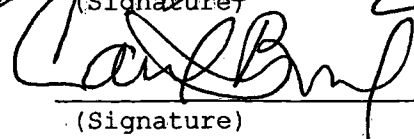
Completed by:
(CLP Lab)


(Signature)

Melissa Duggan / Doc. Ctrl.
(Print Name & Title)

6/24/08
(Date)

Audited By:
(USEPA)


(Signature)

Carol Bearp
(Print Name & Title)

6/30/08
(Date)



DataChem Laboratories, Inc.
Field Chain-of-Custody Record

SDG / MH2008
Case / 37402

Msk 153.0

CLP

Page ____ of ____

Client Name & Address: Tetra Tech, Inc. 136 E South Temple, Ste. 910 Salt Lake City, UT 84111			Project No.: 100FFXT18974-6901		Preservation Code	Sample Matrix Code	Sample for Matrix QC	Analyses Requested								No. of Containers	Matrix Codes: W) Water B) Bulk L) Liquid F) Filler S) Soil G) Wipe C) Solid M) Media Preservation Codes: 1) Cool to 4°C 2) HCl to pH<2, 4°C 3) H ₂ SO ₄ to pH<2, 4°C 4) HNO ₃ to pH<2, 4°C 5) NaOH to pH>12, 4°C 6) ZnOAc/NaOH to pH>9, 4°C
Phone: 801 364 1064			Project Name: Lower Silver Creek					Dissolved Organic Carbon	Total Metals	Total Dissolved Met	Ferris/Ferric Iron	SO ₄	SPL extraction	TAL-Metals			
FAX: 801 364 2021			Sampler: (Signature) Ch H														
e-mail: Chris.hayes@tetratech.com Sam.Wilkes@tetratech.com																	
Field Sample Number	Site ID	Date	Time	Depth	DCL Sample Number												
SC-SW-1	SC-SW-1	6/2/08	13:15			W		X	X	X	X	X				5	
"	"	"	"			S							X	X		1	
SC-SW-2	SC-SW-2	6/2/08	14:30			W		X	X	X	X	X				5	
"	"	"	"			S							X	X		1	
SC-SW-3	SC-SW-3	6/2/08	15:15			W		X	X	X	X	X				5	
"	"	"	"			S							X	X		1	
SC-SW-4	SC-SW-4	6/2/08	16:00			W		X	X	X	X	X				5	
"	"	"	"			S							X	X		1	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Rad <input type="checkbox"/> Flammable <input type="checkbox"/> Poison <input type="checkbox"/> Unknown					Sample Disposal <input type="checkbox"/> Return to Client <input type="checkbox"/> Archive for ____ Months <input type="checkbox"/> Disposal by Lab (a fee may be assessed if samples are retained longer than 3 months)					Requested Turn Around Time <input type="checkbox"/> 2 Days (Rush) <input type="checkbox"/> 7 Days <input type="checkbox"/> 21 Days <input type="checkbox"/> 3 Days (Rush) <input type="checkbox"/> 14 Days <input type="checkbox"/> Other (Rush is email or fax data unless previously approved)							
Relinquished by: (Signature) Ch H					Received by: (Signature) [Signature]					Carrier/Airbill #: Date 6/3/08 Time 0840 Shipped to: DataChem Laboratories, Inc. 960 West LeVoy Drive Salt Lake City, UT 84123 Phone: (800) 356-9135 Phone: (801) 266-7700 FAX: (801) 268-9992 www.datachem.com							
Relinquished by: (Signature)					Received by: (Signature)					Date Time							
Relinquished by: (Signature)					Received by: (Signature)					Date Time							

White - Laboratory Copy

Yellow - Client Copy

Case 37402

CLP Sample ID	Field Sample number	Matrix	Collection date	Collection time	Analysis requested
MH2600	SC-SW-1	water	6/2/2008	13:15	TM by ICP-MS (1554.1)
MH2601	SC-SW-1	water (DM)	6/2/2008	13:15	DM by ICP-MS (1554.1)
MH2608	SC-SW-1	soil	6/2/2008	13:15	TM/SPLP (1553.0)
MH2602	SC-SW-2	water	6/2/2008	14:30	TM by ICP-MS (1554.1)
MH2603	SC-SW-2	water (DM)	6/2/2008	14:30	DM by ICP-MS (1554.1)
MH2609	SC-SW-2	soil	6/2/2008	14:30	TM/SPLP (1553.0)
MH2604	SC-SW-3	water	6/2/2008	15:15	TM by ICP-MS (1554.1)
MH2605	SC-SW-3	water (DM)	6/2/2008	15:15	DM by ICP-MS (1554.1)
MH2610	SC-SW-3	soil	6/2/2008	15:15	TM/SPLP (1553.0)
MH2606	SC-SW-4	water	6/2/2008	16:00	TM by ICP-MS (1554.1)
MH2607	SC-SW-4	water (DM)	6/2/2008	16:00	DM by ICP-MS (1554.1)
MH2611	SC-SW-4	soil	6/2/2008	16:00	TM/SPLP (1553.0)

Request for Quote (RFQ) for Modified Analysis

Date: April 22, 2008

Subject: Modification Reference Number: 1553.0

Title: SPLP for ICP-AES

Sample Matrix: Soil/Sediment

Fraction Affected: Metals

Statement of Work: ILM05.4

Purpose:

The Contractor Laboratory is requested to perform the following modified analyses under the Inorganic Statement of Work (SOW) ILM05.4, based on the additional specifications listed below. Unless specifically modified by this modification, all analyses, Quality Control (QC), and reporting requirements specified in SOW ILM05.4 remain unchanged and in full force and effect. The number of samples requested in this modification is not guaranteed.

Please note that accepting a modified analysis request is voluntary, and that the Laboratory is not required to accept the modified analysis. There will be no adverse effect to the Laboratory for not accepting the modified analysis request. However, once the Laboratory accepts the request for modified analysis, it shall perform the analysis in accordance with this modification and as specified in SOW ILM05.4.

The Laboratory is requested to review the modification described herein, determine whether or not it shall accept the requested modified analyses, and complete the attached response form. The Laboratory shall provide comments in response to the required changes in the designated area, in order to ensure that the modified analysis can be completed in accordance with the specifications described herein.

Notice to Contractors: Acceptance of Modified Analysis samples will not count against the monthly capacity.

Modification to the SOW Specifications:

The contract Laboratory shall extract soil/sediment samples by Method SW-846 1312 [Synthetic Precipitation Leaching Procedure] using extraction fluid number two.

The Laboratory shall digest the SPLP extracts by preparation methods HW1 or MW1, and analyze for the Target Analyte List (TAL) by ICP-AES as indicated on the Traffic Report/Chain of Custody record.

The Laboratory shall analyze the SPLP extraction blanks as preparation blanks (PBW).

The Laboratory shall perform the Matrix Spike at the SOW specified levels.

The Laboratory shall report SPLP results as aqueous samples.

The Laboratory shall provide raw data [laboratory bench sheets, logs, notebook pages] for the SPLP procedure. This will include the initial determination of percent solids, amount of liquid (if any) separated from the solid phase, mass of solids material, and volume of extraction fluid used.

Reporting Requirements:

Hardcopy and electronic data reporting are required as specified per SOW ILM05.4. All hardcopy and electronic data shall be adjusted to incorporate modified specifications. This includes attaching a copy of the requirements for modified analysis to the SDG Narrative. If specific problems occur with incorporation of the modified analysis into the hardcopy and/or electronic deliverable, the Laboratory shall contact the DASS Manager within the Sample Management Office (SMO) at (703) 818-4233 or via email at CCSSUPPORT@fedcsc.com for resolution.

All samples and/or fractions assigned to an SDG shall be analyzed under the same Modified Analysis requirements as established in this memorandum. The Laboratory shall not include data from multiple Modified Analyses in one SDG.

The Laboratory shall include the Modification Reference Number 1553.0 on each hardcopy data form under the "NRAS No:" header appearing on each form as well as the "NRAS No." field on the Record type 21 of the electronic deliverable (if diskette deliverable is required). The Laboratory shall also document the Modification Reference Number and Solicitation Number on the SDG Coversheet.

Clarifications/Revisions to the RFQ for Modified Analysis:

Laboratory Name:**Laboratory Comments:**